AMENDMENTS TO THE CLAIMS

CLAIMS:

1. **(Currently Amended)** An isolated peptide ~~of the formula~~comprising a Lol p 1 T cell epitope said peptide comprising at least 5 contiguous amino acids of an amino acid sequence derived or selected from:

(i) amino acids 19-47;

(ii) amino acids 73-92;

(iii) amino acids 100-128;

(iv) amino acids 127-146;

(v) amino acids 154-173;

(vi) amino acids 181-209.

inclusive, of Lol p 1 or a homolog thereof;

~~X_1-X_2-X_3~~

~~wherein:~~

~~X_1 and X_3 may be the same or different and each is an amino acid sequence comprising from 0 to 40 naturally or non-naturally occurring amino acid residues;~~

~~X_2 is any amino acid sequence derived from or homologues to Lol p 1,~~

and wherein said peptide molecule is capable of interacting with T cells and modifying T cell function when incubated with cells from subjects having a condition characterised by an aberrant, unwanted or otherwise inappropriate immune response to Lol p 1 or a functional derivative, homologue, mutant or analogue of said peptide.

2. **(Currently Amended)** An isolated peptide comprising a Lol p 5 T cell epitope said peptide comprising at least 5 contiguous amino acids of an amino acid sequence derived or selected from:

(i) amino acids 37-81;

(ii) amino acids 118-137;

(iii) amino acids 145-173;

(iv) amino acids 172-191;

(v) amino acids 190-245;.

inclusive, of Lol p 5 or a homolog thereof;

~~of the formula:~~

~~X_1-X_2-X_3~~

~~wherein:~~

~~X_1 and X_3 may be the same or different and each is an amino acid sequence comprising from 0 to 40 naturally or non-naturally occurring amino acid residues;~~

~~X_2 is any amino acid sequence derived from or homologues to Lol p 5,~~

and wherein said peptide molecule is capable of interacting with T cells and modifying T cell function when incubated with cells from subjects having a condition characterised by an aberrant, unwanted or otherwise inappropriate immune response to Lol p 5 or a functional derivative, homologue, mutant or analogue of said peptide provided that X_2 is not the amino acid sequence 100-119 or 190-209.

3. **(Cancelled)**

4. **(Currently Amended)** The isolated peptide according to claim ~~3~~ 1 wherein said amino acid sequence is ~~derived from, homologous to or contiguous with~~ amino acids 19-38~~47, 73-92, 100-128, 127-146, 154-173 and/or 181-209~~ inclusive of Lol p 1 or a homolog thereof.

5. **(Currently Amended)** The isolated peptide according to claim ~~4~~ 1 wherein said amino acid sequence is ~~derived from, homologous to or contiguous with~~ amino acids ~~19-38,~~ 28-47, ~~73-92, 100-119, 109-128, 127-146, 154-173, 181-200 and/or 190-209~~ inclusive of Lol p 1 or a homolog thereof.

6. **(Currently Amended)** The isolated peptide according to claim ~~5~~ 1 wherein said amino acid sequence is ~~derived from, homologous to or contiguous with~~ amino acids ~~19-38, 109-128, 154-173 and/or 190-209~~ 73-92 inclusive of Lol p 1 or a homolog thereof.

7. **(Currently Amended)** The isolated peptide according to claim ~~6~~ 1 wherein said amino acids sequence is amino acids 100-119 ~~are 19-38~~ inclusive of Lol p 1 or a homolog thereof.

8. **(Currently Amended)** The isolated peptide according to claim ~~6~~ 1 wherein said amino acids sequence is amino acids ~~are~~ 109-128 ~~and/or 154-173~~ inclusive of Lol p 1 or a homolog thereof.

9. **(Currently Amended)** ~~A peptice~~ The isolated peptide according to claim ~~6~~ 1 wherein said amino acid sequence is amino acids 127-146 ~~s are 190-209~~ inclusive of Lol p 1 or a homolog thereof.

10. **(Cancelled)**

11. **(Currently Amended)** The isolated peptide according to claim 2 wherein said amino acid sequence is ~~derived from, homologous to or contiguous with~~ amino acids 37-56~~83~~, ~~118-137, 145-173, 172-191 or 190-245~~ inclusive of Lol p 5 or a homolog thereof.

12. **(Currently Amended)** The isolated peptide according to claim ~~11~~ 2 wherein said amino acid sequence is ~~derived from, homologous to or contiguous with~~ amino acids 46-65 ~~37-56, 46-65, 55-74, 64-83, 118-137, 145-164, 154-173, 172-191, 199-218, 208-227, 217-236~~

~~and/or 226-245~~ inclusive of Lol p 5 or a homolog thereof.

13. **(Currently Amended)** The isolated peptide according to claim ~~12~~ wherein said amino acid sequence is ~~derived from, homologous to or contiguous with~~ amino acids 55-74 ~~37-56, 145-164, 154-173, 217-236 and/or 226-245~~ inclusive of Lol p 5 or a homolog thereof.

14. **(Currently Amended)** The isolated peptide according to claim ~~13~~ 2 wherein said amino acid is amino acids 64-83 ~~s are 37-56~~ inclusive of Lol p 5 or a homolog thereof.

15. **(Currently Amended)** The isolated peptide according to claim ~~13~~ 2 wherein said amino acid is amino acids 118-137 ~~are 145-164 and/or 154-173~~ inclusive of Lol p 5 or a homolog thereof.

16. **(Currently Amended)** The isolated ~~A~~ peptide according to claim ~~13~~ 2 wherein said amino acid is amino acids 145-164 ~~are 217-236 and/or 226-245~~ inclusive of Lol p 5 or a homolog thereof.

17. **(Currently Amended)** The isolated peptide according to claim ~~3~~ 1 wherein said amino acid sequence comprises at least 5 amino acids derived from ~~one or more of the following~~ amino acid sequences selected from:

LDAKSTWYGKPTGAGPKDNG (SEQ ID NO: 5)
~~KPTGAGPKDNGGACGYKDVD (SEQ ID NO: 6)~~
~~FEIKCTKPESCSGEAVTVTI (SEQ ID NO: 11)~~
~~IAPYHFDLSGHAFGSMAKKG (SEQ ID NO: 14)~~
GHAFGSMAKKGEEQNVRSAG (SEQ ID NO: 15)
~~AGELELQFRRVKCKYPDDTK (SEQ ID NO: 17)~~
GSNPNYLAILVKYVDGDGDV (SEQ ID NO: 20)
~~KGKDKWIELKESWGAVWRID (SEQ ID NO: 23)~~
KESWGAVWRIDTPDKLTGPF (SEQ ID NO: 24)

18. **(Currently Amended)** The isolated peptide according to claim 17 wherein said amino acid sequence ~~is derived from one or more of SEQ ID NO:5, SEQ ID NO:15, SEQ ID NO:20 or SEQ ID NO:24.~~ corresponds substantially to SEQ ID NO:5.

19. **(Currently Amended)** The isolated peptide according to claim ~~10~~ 2 wherein said amino acid sequence comprises at least 5 amino acids derived from ~~one or more of the following~~ amino acid sequences selected from:

DVNAGFKAAVAAAANAPPAD (SEQ ID NO: 33)
~~VAAAANAPPADKFKIFEAAF (SEQ ID NO: 34)~~
~~ADKFKIFEAAFSESSKGLLA (SEQ ID NO: 35)~~
~~AFSESSKGLLATSAAKAPGL (SEQ ID NO: 36)~~
~~LRVIAGALEVHAVKPATEEV (SEQ ID NO: 42)~~
GELQIVDKIDAAFKIAATAA (SEQ ID NO: 45)
DAAFKIAATAANAAPTNDKF (SEQ ID NO: 46)
~~KFTVFESAFNKALNECTGGA (SEQ ID NO: 48)~~
~~PSLEAAVKQAYAATVAAAPE (SEQ ID NO: 51)~~
~~AYAATVAAAPEVKYAVFEAA (SEQ ID NO: 52)~~
PEVKYAVFEAALTKAITAMT (SEQ ID NO: 53)
AALTKAITAMTQAQKAGKPA (SEQ ID NO: 54)

20. **(Currently Amended)** The isolated peptide according to claim 19 wherein said amino acid sequence ~~is derived from one or more of~~ corresponds substantially to SEQ ID NO:33~~, SEQ ID NO:45, SEQ ID NO:46, SEQ ID NO:53 or SEQ ID NO:54.~~

21. **(Currently Amended)** ~~An~~ The isolated peptide ~~comprising an~~ according to claim 1 wherein said amino acid sequence is ~~derived from or homologous to Lol p 1 or Lol p 5 wherein said peptide molecule is capable of interacting with T cells and modifying T cell function when incubated with cells from subjects having a condition characterized by an aberrant, unwanted or otherwise inappropriate immune response to Lol p 1 or Lol p 5 or a functional derivative, analogue or mutant of said peptide~~ amino acids 181-200 inclusive of Lol p 1 or a homolog

thereof.

22. **(Currently Amended)** The isolated peptide according to claim ~~21~~ 1 wherein said amino acid sequence is ~~of 5-100 residues derived from, homologous to or contiguous with amino acids 1-240 inclusive of Lol p 1~~ amino acids 190-209 inclusive of Lol p 1 or a homolog thereof.

23. **(Currently Amended)** The isolated peptide according to claim ~~23~~ 2 wherein said amino acid sequence is ~~derived from, homologous to or contiguous with amino acids 19-47, 73-92, 100-128, 127-146, 154-173 and/or 181-209 inclusive of Lol p 1~~ amino acids 154-173 inclusive of Lol p 5 or a homolog thereof.

24. **(Currently Amended)** The isolated peptide according to claim ~~23~~ 2 wherein said amino acid sequence is ~~derived from, homologous to or contiguous with~~ amino acids ~~19-38, 28-47, 73-92, 100-119, 109-128, 127-146, 154-173, 181-200 and/or 190-209 inclusive of Lol p 1~~ 172-191 inclusive of Lol p 5 or homolog thereof.

25. **(Currently Amended)** The isolated peptide according to claim ~~24~~ 2 wherein said amino acid sequence is ~~derived from, homologous to or contiguous with~~ amino acids ~~19-38, 109-128, 154-173 and/or 190-209~~ 199-218 inclusive of Lol p 5 ~~1~~ or a homolog thereof.

26. **(Currently Amended)** The isolated peptide according to claim ~~25~~ 2 wherein said amino ~~acids are 19-38 inclusive of Lol p 1~~ acid sequence is amino acids 208-227 inclusive of Lol p 5 or a homolog thereof.

27. **(Currently Amended)** The isolated peptide according to claim ~~25~~ 2 wherein said amino ~~acids are 109-128 and/or 154-173 inclusive of Lol p 1~~ acid sequence is amino acids 217-236 inclusive of Lol p 5 or a homolog thereof.

28. **(Currently Amended)** The isolated peptide according to claim ~~25~~ 2 wherein said amino ~~acids are 190-209 inclusive of Lol p 1~~ acid sequence is amino acids 226-245 inclusive of Lol p 5 or a homolog thereof.

29. **(Currently Amended)** The isolated peptide according to claim ~~25~~ 17 wherein said amino acid sequence corresponds substantially to SEQ ID NO:15 ~~comprises at least 5 amino acids derived from one or more of the following amino acid sequences:~~

~~LDAKSTWYGKPTGAGPKDNG (SEQ ID NO: 5)~~
~~KPTGAGPKDNGGACGYKDVD (SEQ ID NO: 6)~~
~~FEIKCTKPESCSGEAVTVTI (SEQ ID NO: 11)~~
~~IAPYHFDLSGHAFGSMAKKG (SEQ ID NO: 14)~~
~~GHAFGSMAKKGEEQNVRSAG (SEQ ID NO: 15)~~
~~AGELELQFRRVKCKYPDDTK (SEQ ID NO: 17)~~
~~GSNPNYLAILVKYVDGDGDV (SEQ ID NO: 20)~~
~~KGKDKWIELKESWGAVWRID (SEQ ID NO: 23)~~
~~KESWGAVWRIDTPDKLTGPF (SEQ ID NO: 24)~~

30. **(Currently Amended)** The isolated peptide according to claim ~~25~~ 17 wherein said amino acid sequence ~~is derived from one or more of SEQ ID NO:5 or SEQ ID NO:15, SEQ ID NO: 20 or SEQ ID NO:24~~ corresponds substantially to SEQ ID NO:20.

31. **(Currently Amended)** The isolated peptide according to claim ~~21~~ 19 wherein said amino acid sequence ~~is of 5-100 residues derived from, homologous to or contiguous with amino acids 1-276 inclusive of Lol p 5 provided that said peptide does not consist of the amino acid sequence 100-110 or 190-209~~ corresponds substantially to SEQ ID NO:24.

32. **(Currently Amended)** The isolated peptide according to claim ~~31~~ 19 wherein said amino acid sequence ~~is derived from, homologous to or contiguous with amino acids 37-83, 118-137, 145-173, 172-191 or 190-245 inclusive of Lol p 5~~ corresponds substantially to SEQ ID NO:45.

33. **(Currently Amended)** The isolated peptide according to claim ~~32~~ 19 wherein said amino acid sequence ~~is derived from, homologous to or contiguous with amino acids 37-56, 46-65, 55-74, 64-83, 118-137, 145-164, 154-173, 172-191, 199-218, 208-227, 217-236 and/or 226-~~

~~245 inclusive of Lol. p 5~~ corresponds substantially to SEQ ID NO:46.

34. **(Currently Amended)** The isolated peptide according to claim ~~33~~ 19 wherein said amino acid sequence ~~is derived from, homologous to or contiguous with amino acids 37-56, 145-164, 154-173, 217-236 and/or 226-245 inclusive of Lol p 5~~ corresponds substantially to SEQ ID NO:53.

35. **(Currently Amended)** The isolated peptide according to claim ~~34~~ 19 wherein said amino ~~acids are 37-56 inclusive of Lol p 5~~ acid sequence corresponds substantially to SEQ ID NO:54.

36. **(Currently Amended)** The peptide according to claim 1 or ~~2-34~~ wherein said ~~amino acids are 145-164 and/or 154-173 inclusive of Lol p 5~~ modification of T cell functioning is the induction of T cell differentiation.

37. **(Currently Amended)** The peptide according to claim 1 or 2 wherein said peptide exhibits reduced or ablated IgE binding.

38. **(Currently Amended)** An isolated nucleic acid molecule comprising a sequence of nucleotide encoding or complementary to a sequence encoding ~~a~~ the isolated peptide according to ~~any one of claims 1-39~~ claim 1 or 2.

39. **(Currently Amended)** A method for the treatment and/or prophylaxis of a condition in a subject, which condition is characterised by an aberrant, unwanted or otherwise inappropriate immune response to Lol p 1 and/or Lol p 5, said method comprising administering to said subject an effective amount of a peptide according to ~~any one of claims 1-39~~ claim 1 or 2 for a time and under conditions sufficient to remove or reduce the presence or function ~~in said subject~~ of T cells directed to said Lol p 1 and/or Lol p 5 or a functional homolog thereof.

40. **(Original)** The method according to claim 39 wherein said condition is hypersensitivity to a grass pollen of the subfamily Pooiodeae and even more preferably Rye

grass or Timothy grass pollen.

Claims 41-44 (Cancelled)

45. **(Currently Amended)** A pharmaceutical composition comprising a peptide according to ~~any one of claims 1-39~~ claim 1 or 2 together with one or more pharmaceutically acceptable carriers and/or diluents.

46. **(Currently Amended)** A method of diagnosing or monitoring a condition in a mammal, which condition is characterised by an aberrant, unwanted or inappropriate response to Lol p 1 and/or Lol p 5, said method comprising screening for Lol p 1 and/or Lol p 5 reactive T cells and/or antibodies utilising the peptides according to ~~any one of claims 1-39~~claim 1 or 2.

~~46.~~ 47. **(Currently Amended)** The method according to claim ~~45~~46 wherein said condition is hypersensitivity to a grass pollen of the subfamily Pooiodeae and even more preferably Rye grass or Timothy grass pollen.

~~47~~ 48. **(Currently Amended)** A diagnostic kit for use in ~~the method of any one of claims 41-46~~ diagnosing or monitoring a condition in a mammal, which condition is characterised by an aberrant, unwanted or inappropriate response to Lol p 1 and/or Lol p 5, wherein said kit comprises a peptide according to ~~any one of claims 1-39~~ claims 1 or 2.

49. **(NEW)** A method for the treatment and/or prophylaxis of a condition in a subject, which condition is characterised by an aberrant, unwanted or otherwise inappropriate immune response to Lol p 1 and/or Lol p 5, said method comprising administering to said subject an effective amount of a nucleic acid according to claim 38 for a time and under conditions sufficient to remove or reduce the presence or function of T cells directed to said Lol p 1 and/or Lol p 5 or a functional homolog thereof.

50. **(NEW)** A pharmaceutical composition comprising a nucleic acid according to claim 38 together with one or more pharmaceutically acceptable carriers and/or diluents.

51. **(NEW)** A method of diagnosing or monitoring a condition in a mammal, which condition is characterised by an aberrant, unwanted or inappropriate response to Lol p 1 and/or Lol p 5, said method comprising screening for Lol p 1 and/or Lol p 5 reactive T cells and/or antibodies utilising the nucleic acid according to claim 38.

52. **(NEW)** A diagnostic kit for use in the method of diagnosing or monitoring a condition in a mammal, which condition is characterised by an aberrant, unwanted or inappropriate response to Lol p 1 and/or Lol p 5, wherein said kit comprises a nucleic acid according to claim 38.